Warfarin-Induced Skin Necrosis After Coronary Artery Bypass Grafting

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A 62-year-old man with 4-vessel coronary artery disease and a history of deep vein thrombosis underwent coronary artery bypass grafting (CABG) with coronary endarterectomy of the left circumflex coronary artery. After surgery, he was placed on oral anticoagulant therapy with warfarin (5 mg/d). On postoperative day (POD) 3, erythematous and hemorrhagic bullous skin lesions appeared around the saphenous artery incision on the patient's right leg (Fig. 1). Thinking that these lesions might be due to the warfarin therapy, we immediately stopped it and started enoxaparin sodium (60 mg/d). We also administered vitamin K and fresh frozen plasma. Blood samples were drawn and sent for laboratory analysis. The lesions disappeared 5 days later, on POD 8. The patient was discharged from the hospital on POD 9. Ten days later, laboratory test results for the previously drawn blood samples revealed protein C and protein S deficiencies in our patient. At a follow-up visit one month after discharge, the only lesions seen on the patient's right leg were a few areas of hyperpigmented skin (Fig. 2).

Comment

Warfarin-induced skin necrosis (WISN) is a rare but dangerous complication of anticoagulation therapy. At a prevalence of ≤0.1%,[1] WISN is associated with high rates of morbidity and mortality.[2,3] It predominantly affects middle-aged, perimenopausal, obese women being treated for deep vein thrombosis or pulmonary emboli.[3] The skin and subcutaneous tissue necrosis characteristic of WISN typically begins 3 to 6 days after warfarin therapy starts.[2] Initial signs include localized paresthesia with an

Fig. 1 *Photograph taken 3 days after warfarin therapy was started shows skin lesions around the saphenous artery incision on the patient's right leg.*

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Fig. 2 *Photograph shows healed skin lesions one month after the patient's discharge from the hospital.*

erythematous flush, which progresses to petechiae and hemorrhagic bullae and eventually to full-thickness skin necrosis.[2,3] The condition is thought to be associated with deficiencies of protein C, protein S, factor VII, and antithrombin III.[2-5] Diagnosis of WISN warrants immediately stopping warfarin therapy.[2,3] Physicians should consider a diagnosis of WISN when skin lesions appear in patients receiving warfarin after CABG. Early diagnosis and treatment can help avoid morbidity and death.

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